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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,106	04/14/2004	Gary L. Burkhardt	800740	3105
23372	7590	03/24/2006		
TAYLOR RUSSELL & RUSSELL, P.C. 4807 SPICEWOOD SPRINGS ROAD BUILDING TWO SUITE 250 AUSTIN, TX 78759			EXAMINER SCHINDLER, DAVID M	
			ART UNIT 2862	PAPER NUMBER

DATE MAILED: 03/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/709,106	BURKHARDT ET AL.	
	Examiner	Art Unit	
	David Schindler	2862	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2,9 and 10 is/are rejected.
- 7) ☒ Claim(s) 3-8 and 11-22 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Request for Information

1. Applicant and the assignee of this application are required under 37 CFR 1.105 to provide information that the examiner has determined is reasonably necessary to the examination of this application. In response to this requirement, please provide the publication date of the reference "APPLICATION OF REMOTE-FIELD EDDY CURRENT (RFEC) TESTING TO INSPECTION OF UNPIGGABLE PIPELINES" to Burkhardt and the publication date of the reference "Application of Remote-field Eddy Current Testing to Inspection of Unpiggable Pipelines" to Merritt which are listed on form PTO-892. Copies of these references have been provided with this Office Action.

This requirement is an attachment of this Office action. A complete reply to this Office action must include a complete reply to this requirement. The time period for reply to this requirement coincides with the time period for reply to the Office action.

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

4. Claims 1, 2, 4, 5, and 9-22 are objected to because of the following informalities:

As to Claim 1,

The phrase "the pipeline" on line 17 lacks antecedent basis. Note the term "pipelines" on line 1, and the phrase "a pipeline" on line 11.

The phrase "the internal restriction" on the last line lacks antecedent basis. Note the phrase "having internal restrictions" on lines 11-12 and the phrase "an internal restriction" on lines 16-17.

As to Claim 2,

The phrase "the pipeline" on the last line lacks antecedent basis.

As to Claim 4,

The phrase "the pipeline" on the last line lacks antecedent basis.

As to Claim 5,

The phrase "the arm" listed twice on line 4 lacks clear antecedent basis.

The phrase "the excitation coil segment" on line 5 lacks antecedent basis.

The phrase "the rollers" on line 8 lacks antecedent basis.

The phrase "the rollers" on line 11 lacks antecedent basis.

The phrase "the internal restrictions" on the last line lacks antecedent basis.

As to Claim 9,

The phrase "the pipeline" on lines 5, 7, and 11-12 lacks antecedent basis.

As to Claim 10,

The phrase "the pipeline" on line 4 lacks antecedent basis.

As to Claim 11,

The phrase "each pivot arm" on lines 9 and 11 lacks antecedent basis.

As to Claim 12,

The phrase "the pipeline" on line 19 lacks antecedent basis. Note the term.

"pipelines" on line 1, and the phrase "a pipeline" on line 13.

As to Claim 13,

The phrase "the pipeline" on the last line lacks antecedent basis.

As to Claim 14,

The phrase "the pipeline" on the last line lacks antecedent basis.

As to Claim 15,

The phrase "the arm" on line 3 lacks clear antecedent basis.

The phrase "the excitation coil segment" on lines 3-4 lacks antecedent basis.

The phrase "the rollers" on lines 7 and 10 lacks antecedent basis.

The phrase "the internal restrictions" on the last line lacks antecedent basis.

As to Claim 18,

The phrase "the pipeline" on lines 4, 6, and 10-11 lacks antecedent basis.

As to Claim 19,

The phrase "the pipeline" on lines 3-4 lacks antecedent basis.

As to Claim 20,

The phrase "each pivot arm" on lines 9 and 11 lacks antecedent basis.

As to Claim 21,

The phrase "the pipeline" on lines 14 and 18 lacks antecedent basis. Note the term "pipelines" on line 1.

As to Claim 22,

The phrase "the pipeline" on lines 5, 7, and 11-12 lacks antecedent basis.

As to Claims 16 and 17,

These claims are objected to for being dependent on an objected claimed.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 2, 9, and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Krieg et al. (herein referred to as "Kri") (4,769,598).

As to Claim 1,

Kri discloses affixing a collapsible excitation coil (26) to a first end of an inspection pig structure (Figure 1), the inspection pig structure including an instrumentation housing ((3) and (4) and (Column 6, Lines 32-41)), affixing a collapsible sensor array to a second end opposing the first end of the inspection pig structure ((Figures 1 and 2) and (Column 4, Lines 10-20)), passing the inspection pig structure

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with the affixed collapsible excitation coil and the affixed collapsible sensor array through a pipeline having internal restrictions (Figure 1), collapsing the excitation coil and the sensor array form an expanded deployed position for enabling the inspection pig structure with the affixed collapsible excitation coil and sensor array to transverse an internal restriction in the pipeline, and returning the affixed collapsible excitation coil and sensor array to an expanded deployed position when the internal restriction has been traversed ((Figure 1) and (Column 3, Lines 26-38) and (Column 4, Lines 10-20)).

As to Claim 2,

Kri discloses electrically activating the collapsible excitation coil by excitation circuits in the instrumentation housing (Column 6, Lines 32-41), and detecting a remote field eddy current signal by the collapsible sensor array electrically connected to detection circuits in the instrumentation housing for determining defects in a wall of the pipeline ((Column 3, Lines 60-68) and (Column 4, Lines 1-20 and 56-63) and (Column 6, Lines 32-41)).

As to Claim 9,

Kri discloses maximum diameters of a fully collapsed excitation coil, a fully collapsed sensor array, and the inspection pig structure are less than a minimum internal diameter of the pipeline having internal restrictions for enabling the system to traverse internal restrictions in the pipeline, and maximum diameters of a collapsible excitation coil in a fully expanded deployed position and a collapsible sensor array in a fully expanded deployed position are determined by an internal diameter of the pipeline having internal restrictions (Figure 1).

As to Claim 10,

Kri discloses the step of affixing a collapsible sensor array further includes the step of affixing a plurality of sensors positioned circumferentially on an internal diameter of the pipeline and electrically connecting the sensors to detection circuits in the instrumentation housing ((Figures 1 and 2) and (Column 6, Lines 32-41)).

Allowable Subject Matter

7. Claims 12-22 are allowed upon overcoming the above noted claim objections.
8. Claims 3, 4, 5, 6, 7, 8, and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance:

As to Claim 3,

The primary reason for the allowance of claim 3 is the inclusion of the step of affixing a collapsible excitation coil further includes the step of affixing a plurality of electrically interconnected collapsible excitation coil segments. It is these features found in the claim, as they are claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this claim allowable over the prior art.

As to Claim 11,

The primary reason for the allowance of claim 11 is the inclusion of pivotally connecting a structural member pivot point opposite the sensor pivot point on the pivot arm to the second end of the inspection pig structure, and spring-loading each pivot arm

at the structural member pivot point for maintaining an unobstructed fully expanded deployed position of each pivot arm. It is these features found in the claim, as they are claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this claim allowable over the prior art.

As to Claim 12,

The primary reason for the allowance of claim 12 is the inclusion of means for affixing a collapsible excitation coil including a plurality of electrically interconnected collapsible excitation coil segments to a first end of an inspection pig structure. It is these features found in the claim, as they are claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this claim allowable over the prior art.

As to Claim 21,

The primary reason for the allowance of claim 21 is the inclusion of a collapsible excitation coil including a plurality of electrically interconnected collapsible coil segments affixed to a first end of the inspection pig structure. It is these features found in the claim, as they are claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this claim allowable over the prior art.


Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Schindler whose telephone number is (571) 272-2112. The examiner can normally be reached on M-F (8:00 - 5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on (571) 272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


David Schindler
Examiner
Art Unit 2862

DS


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